**East Central College**

**Physics and Transfer Engineering**

**Assessment Plan**

**Updated Spring 2015**

Individual Course Assessment:

Courses will be reviewed and assessment reports submitted every three years in the following rotation, beginning in 2012:

Items utilized for individual course assessment, continuity, and retention will include:

* Revision of course competencies and objectives
* Review of departmental pretests/final exams and external exams (where applicable)
  + item analysis
  + alignment with course objectives
  + Force Concept Inventory test produced by Arizona State University will be utilized in Survey of Physical Science and Introduction to Physics
  + Force Concept Inventory, produced by Arizona State University administered in College Physics and General Physics
  + Missouri S&T’s EE 281 Circuit exam for Intro to Circuits
* Success rates in prerequisite courses
* Success rates in subsequent courses
* CAAP/other embedded assessments in selected courses
* Transfer student survey is administered to students after their first year at Missouri S&T

Course assessment outlined above will include all sections offered in all formats (traditional and alternative), and at all locations (main campus, and all satellite location offerings) taught by full-time or adjunct faculty (where applicable).

CLO Assessment:

The departments will assess the CLO of Critical/Creative Thinking by administering the Science Reasoning CAAP test on a rotating basis in Intro Physics, Survey Physical Science, College Physics I, and General Physics I. Following East Central’s established rotation, starting Fall 2014, the Science Reasoning CAAP test will be administered as an entry skills assessment with subsequent testing every 4 years. Starting Spring 2016 post-tests using the Science Reasoning test will be administered in previous designated classes with repeated assessment every 4 years.

The institution’s CLOs for Ethics and Social Responsibility in the Intro Engineering Design using the assessment tool developed by the AQIP action project committee, will be administered annually.

Program Review Schedule:

In accordance with East Central College’s schedule of divisional program review, Physics and Transfer Engineering will report every five years. Non-majors Physics is scheduled for 2014 and Transfer Engineering (which includes General Physics and the Calculus Sequence) in 2016. The review will be presented to and reviewed by a committee of internal and external constituents and include but not be limited to items such as:

* Program mission
* Staffing and organization
* Learning Outcomes
* Student data
* SWOT analysis

Additionally, the Engineering Department will further develop its advisory board, including membership recruitment, advisory board assessment, and rotational meeting schedule.